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characteristics of the second data pulses indicate a second protocol capability when the second data source/sink has the second protocol capability;

detecting whether the second pulses indicate the first protocol capability or the second protocol capability; and

establishing communication with the second data source/sink using the first protocol if the second data pulses indicate the first protocol capability and using the second protocol if the second data pulses indicate the second protocol capability.

15. (amended) In a network having at least a first data source/sink and a second data source/sink coupled together by a physical medium, a method for determining a communication protocol capability for data transmission over the physical medium, comprising:

receiving first data pulses over the physical medium;

determining whether electrical characteristics of the first data pulses indicate a first communication protocol capability;

selectively outputting second data pulses in response to the first data pulses, wherein the second data pulses are output if the second data source/sink operates in accordance with the first communication protocol capability; and

preventing output of the second data pulses if the second data source/sink does not operation in accordance with the first communication protocol capability.

16. A method for communicating data between a first data source/sink and a second data source/sink, the second data source/sink operating in accordance with a plurality of protocol capabilities, the method comprising the steps of:

storing information in a first storage location in the first data source/sink;

extracting information from data pulses transmitted from the second data source/sink to the first data source/sink and storing the extracted information in a second storage location;

at the first data source/sink, determining the protocol capabilities of the second data source/sink; and

determining the method for communicating data between the first data source/sink and the second data source/sink based upon the determined protocol capabilities of the second data source/sink.

17. The method of claim 16, wherein the first or second storage locations comprise a register, a memory or a table.

18. The method of claim 16, wherein the information stored in the first storage location is encoded into data pulses and transmitted from the first data source/sink to the second data source/sink.

19. The method of claim 16, wherein a state machine determines the protocol capabilities of the second data source/sink.

20. The method of claim 16, wherein the data communicated between the first data source/sink and the second data source/sink comprises an isochronous data.

21. The method of claim 20, wherein the isochronous data comprises video data.

22. The method of claim 20, wherein the isochronous data comprises telephone data.

23. (amended) The method of claim 16, wherein the data is communicated between the first data source/sink and the second data source/sink in accordance with a protocol selected from the group consisting of: isochronous token ring, isochronous Ethernet, non-isochronous Ethernet, FDDI-II, and X.25.

24. The method of claim 16, wherein the first and second data sources/sinks comprise a portion of a star topology network.

25. The method of claim 16, wherein the first and second data sources/sinks comprise a portion of a non-star topology network.

26. The method of claim 16, wherein the first and second data sources/sinks comprise a portion of a ring topology network.

27. The method of claim 16, wherein the first and second data sources/sinks comprise a portion of a tree topology network.

28. The method of claim 16, wherein a physical medium coupled between the first data source/sink and the second data source/sink comprises a twisted pair, coax cable or fiber optic.

29. (amended) A method for communicating data between a first data source/sink and a second data source/sink, the method comprising the steps of:

communicating data between the first data source/sink and the second data source/sink in accordance with a first communication protocol;

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exchanging information between the first data source/sink and the second data source/sink, wherein the information is exchanged in the form of data pulses, wherein electrical characteristics of the data pulses indicate protocol capabilities of the first and/or second data source/sinks;

reconfiguring the first and second data source/sinks; and  
communicating data between the first data source/sink and the second data source/sink in accordance with a second communication protocol.

30. The method of claim 29, wherein the information that indicates protocol capabilities is stored in a register, a memory or a table.

31. The method of claim 29, wherein a state machine determines the protocol capabilities of the data sources/sinks.

32. The method of claim 29, wherein data communicated between the first data source/sink and the second data source/sink comprises an isochronous data.

33. The method of claim 32, wherein the isochronous data comprises video data.

34. The method of claim 32, wherein the isochronous data comprises telephone data.

35. The method of claim 29, wherein the data is communicated between the first data source/sink and the second data source/sink in accordance with a protocol selected from the group consisting of: isochronous token ring, isochronous Ethernet, non-isochronous Ethernet, FDDI-II, and X.25.

36. The method of claim 29, wherein the first and second data sources/sinks comprise a portion of a star topology network.

37. The method of claim 29, wherein the first and second data sources/sinks comprise a portion of a non-star topology network.

38. The method of claim 29, wherein the first and second data sources/sinks comprise a portion of a ring topology network.

39. The method of claim 29, wherein the first and second data sources/sinks comprise a portion of a tree topology network.

40. The method of claim 29, wherein a physical medium coupled between the first data source/sink and the second data source/sink comprises a twisted pair, coax cable or fiber optic.

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41. (amended) A method for communicating data between a first data source/sink and a second data source/sink, the method comprising the steps of:

exchanging information between the first data source/sink and the second data source/sink, wherein the information is exchanged in the form of data pulses, wherein electrical characteristics of the data pulses indicate protocol capabilities of the first and/or second data sources/sinks, wherein the protocol capabilities of the first and second data sources/sinks include at least first and second protocol capabilities;

communicating data between the first data source/sink and the second data source/sink in accordance with a first communication protocol at a first point in time;

configuring the first and second data source/sinks to operate in accordance with a second communication protocol; and

communicating data between the first data source/sink and the second data source/sink in accordance with the second communication protocol.

42. The method of claim 41, wherein the information that indicates protocol capabilities is stored in a register, a memory or a table.

43. The method of claim 41, wherein a state machine determines the protocol capabilities of the data sources/sinks.

44. The method of claim 41, wherein data communicated between the first data source/sink and the second data source/sink comprises an isochronous data.

45. The method of claim 44, wherein the isochronous data comprises video data.

46. The method of claim 44, wherein the isochronous data comprises telephone data.

47. The method of claim 41, wherein the data is communicated between the first data source/sink and the second data source/sink in accordance with a protocol selected from the group consisting of: isochronous token ring, isochronouse Ethernet, non-isochronous Ethernet, FDDI-II, and X.25.

48. The method of claim 41, wherein the first and second data sources/sinks comprise a portion of a star topology network.

49. The method of claim 41, wherein the first and second data sources/sinks comprise a portion of a non-star topology network.

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50. The method of claim 41, wherein the first and second data sources/sinks comprise a portion of a ring topology network.

51. The method of claim 41, wherein the first and second data sources/sinks comprise a portion of a tree topology network.

52. The method of claim 41, wherein a physical medium coupled between the first data source/sink and the second data source/sink comprises a twisted pair, coax cable or fiber optic.

(CLAIMS SHOWING AMENDMENTS MADE IN THE AUGUST 1, 2000  
AMENDMENT)

14. (amended) In a network having at least a first data source/sink and a second data source/sink coupled together by a physical medium, a method for determining at least one protocol capability of the second data source/sink, comprising:

placing first data pulses onto the physical medium, electrical characteristics of the first data pulses indicating a first protocol capability of the first source/sink;

receiving the first data pulses in the second data source/sink;

transmitting second data pulses onto the physical medium from the second data source/sink, wherein electrical characteristics of the second data pulses indicate the first protocol capability when the second data source/sink has the first protocol capability, wherein electrical characteristics of the second data pulses indicate a second protocol capability when the second data source/sink has the second protocol capability;

detecting whether the second pulses indicate the first protocol capability or the second protocol capability; and

establishing communication with the second data source/sink using the first protocol if the second data pulses indicate the first protocol capability and using the second protocol if the second data pulses indicate the second protocol capability.

15. (amended) In a network having at least a first data source/sink and a second data source/sink coupled together by a physical medium, a method for determining a communication protocol capability for data [for] transmission over the physical medium, comprising:

receiving first data pulses over the physical medium;

determining whether electrical characteristics of the first data pulses indicate a first communication protocol capability;

selectively outputting second data pulses in response to the first data pulses, wherein the second data pulses are output if the second data source/sink operates in accordance with the first communication protocol capability; and

preventing output of the second data pulses if the second data source/sink does not operation in accordance with the first communication protocol capability.

29. (amended) A method for communicating data between a first data source/sink and a second data source/sink, the method comprising the steps of:

communicating data between the first data source/sink and the second data source/sink in accordance with a first communication protocol;

exchanging information between the first data source/sink and the second data source/sink, wherein the information is exchanged in the form of data pulses, wherein electrical characteristics of the data pulses indicate [that indicates] protocol capabilities of the first and/or second data source/sinks;

reconfiguring the first and second data source/sinks; and

communicating data between the first data source/sink and the second data source/sink in accordance with a second communication protocol.

41. (amended) A method for communicating data between a first data source/sink and a second data source/sink, the method comprising the steps of:

exchanging information between the first data source/sink and the second data source/sink, wherein the information is exchanged in the form of data pulses, wherein electrical characteristics of the data pulses indicate [that indicates] protocol capabilities of the first and/or second data sources/sinks, wherein the protocol capabilities of the first and second data sources/sinks include at least first and second protocol capabilities;

communicating data between the first data source/sink and the second data source/sink in accordance with a first communication protocol at a first point in time;

configuring the first and second data source/sinks to operate in accordance with a second communication protocol; and

communicating data between the first data source/sink and the second data source/sink in accordance with the second communication protocol.